

Remarks

The Office Action dated January 26, 2005 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-5, 7-58, 60-76, 86-102, and 106-120 are pending in this application. Claims 1-76 stand rejected. Claims 86-102 and 106-120 are withdrawn from consideration.

The rejection of Claims 1-5, 7-21, 23-35, 37-58, 60-64, 66-72, and 74-76 under 35 U.S.C. § 103(a) as being unpatentable over Spriggs et al. (US 6,421,571) in view of Maguire et al. (US 5,331,579) is respectfully traversed.

Spriggs et al. describe a system that includes a data acquisition module, a database module, a display module including a graphical user interface, and a utilities module. The data acquisition module includes a software module and a plurality of data collector modules to interface with data acquisition devices. The database module includes a relational database for storing the collected data and configuration information. The utilities module includes software modules that increase the communications abilities of the system.

Maguire et al. describe a deterministic, probabilistic and subjective modeling system designed to improve the performance of aging power plants. The system collects, stores, and displays data representative of the operating condition of the plant components and calculates the expected life of each component. The system reviews historical data relating to a component, evaluates age degradation and extrapolates into the future to develop a life profile including measures of life left and useful life.

Claim 1 of the present application recites a method for managing internal components of nuclear reactor plants using a network-based system. The method includes the steps of developing inspection recommendations for specific internal components based on information

received and information stored in the database, determining cracking susceptibility for specific internal components based on information received and information stored in the database, wherein the cracking susceptibility determination is based on a base material of the internal component, a weld filler material, and a weld susceptibility index based on a configuration of a weld and historical information of similar internal components in similar reactors, developing contingency options for repair or mitigation of specific internal components based on the cracking susceptibility of specific components, and generating contingency outage schedules for the contingency options.

Spriggs et al. and Maguire et al., alone or in combination, do not describe nor suggest a method for managing internal components of nuclear reactor plants as recited in Claim 1. Particularly, Spriggs et al. and Maguire et al., alone or in combination, do not describe nor suggest a method that includes the steps of developing inspection recommendations for specific internal components based on information received and information stored in the database, determining cracking susceptibility for specific internal components based on information received and information stored in the database wherein the cracking susceptibility determination is based on a base material of the internal component, a weld filler material, and a weld susceptibility index based on a configuration of a weld and historical information of similar internal components in similar reactors, developing contingency options for repair or mitigation of specific internal components based on the cracking susceptibility of specific components, and generating contingency outage schedules for the contingency options. Rather, Spriggs et al. describe collecting data from a plurality of data acquisition devices and generating alarms when the collected data is outside a predetermined allowable range. Spriggs et al. do not describe nor suggest developing inspection recommendations from the collected data, do not describe nor

suggest determining cracking susceptibility of specific internal nuclear reactor plant components based on the collected data, and do not describe nor suggest developing contingency options for repair or mitigation of specific internal components, and generating contingency outage schedules for the contingency options. The Office Action, , at page 3-4, admits that Spriggs "does not specifically disclose and teach a method of developing inspection recommendations for specific components based on information stored in a database; and determining cracking susceptibility for specific internal components based on information received and information stored in a database; developing contingency options for repair or mitigation of specific internal components; generating contingency outage schedules for contingency options".

Further, Maguire et al. describe that their system reviews historical data relating to a component, evaluates age degradation and extrapolates into the future to develop a life profile including measures of life left and useful life. The Office Action, at page 4, admits that "Maguire does not specifically disclose cracking". Also, the Office Action dated July 27, 2004 admits, at page 4, that "Maguire does not specifically disclose. 'determining cracking susceptibility for specific components'". Accordingly, Maguire et al. do not describe nor suggest determining cracking susceptibility for specific internal components. Further, Applicants submit that the assertion at page 4 of the Office Action that Maguire "teaches a method of developing inspection recommendations . . . and determining cracking susceptibility for specific components based on information received and information stored in a database" is inconsistent with the admission on the same page of the Office Action that "Maguire does not specifically disclose cracking". Applicants submit that because Maguire does not specifically disclose cracking, it is impossible for the teachings of Maguire et al. to include determining cracking susceptibility for specific internal components wherein the cracking susceptibility determination is based on a base

material of the internal component, a weld filler material, and a weld susceptibility index based on a configuration of a weld and historical information of similar internal components in similar reactors.

Also, Applicants disagree with the suggestion at pages 4 and 5 of the Office Action that it would have been obvious to modify Maguire et al. to include determining cracking susceptibility for specific internal components wherein the cracking susceptibility determination is based on a base material of the internal component, a weld filler material, and a weld susceptibility index based on a configuration of a weld and historical information of similar internal components in similar reactors. There is no teaching or suggestion that the system of Maguire et al. is capable of being modified to include determining cracking susceptibility for specific internal components wherein the cracking susceptibility determination is based on a base material of the internal component, a weld filler material, and a weld susceptibility index based on a configuration of a weld and historical information of similar internal components in similar reactors. Further, the Office Action has not shown that there is any motivation to modify Maguire other than the motivation supplied by Applicants' application. Applicants also disagree with the assertion that "Maquire would teach one of ordinary skill in the art that cracking of this component (feed water pumps) due to aging would be a major safety as well as cost and thereby would be monitored" because Maquire does not disclose cracking (as the Office Action admits) and therefore could not possibly teach that cracking of a component should be monitored. Further, even if, *arguendo*, Maguire did teach one skilled in the art to monitor cracking of components, there is no teaching or suggestion of determining cracking susceptibility for specific internal components wherein the cracking susceptibility determination is based on a base material of the internal

component, a weld filler material, and a weld susceptibility index based on a configuration of a weld and historical information of similar internal components in similar reactors.

At least for the reasons explained above, Applicants submit that Claim 1 is patentable over Spriggs et al. and Maguire et al., alone or in combination.

Claims 2-5, 7-21 and 23-32 depend from independent Claim 1. When the recitations of dependent Claims 2-5, 7-21 and 23-32 are considered in combination with the recitations of Claim 1, Applicants respectfully submit that Claims 2-5, 7-21 and 23-32 likewise are patentable over Spriggs et al. and Maguire et al., alone or in combination.

Claim 33 recites a network-based system for managing assets that includes a server system configured to develop inspection recommendations for specific internal components based on information received and information stored in the database, determine cracking susceptibility for specific internal components based on information received and information stored in the database, wherein the cracking susceptibility determination is based on a base material of the internal component, a weld filler material, and a weld susceptibility index based on a configuration of a weld and historical information of similar internal components in similar reactors, develop contingency options for repair or mitigation of specific internal components based on the cracking susceptibility of specific components, and generate contingency outage schedules for the contingency options.

Spriggs et al. and Maguire et al., alone or in combination, do not describe nor suggest a network-based system for managing assets as recited in Claim 33. Particularly, and at least for the reasons set forth above, Spriggs et al. and Maguire et al., alone or in combination, do not describe nor suggest a network-based system for managing assets that includes a server system configured to develop inspection recommendations for specific internal components based on

information received and information stored in the database, determine cracking susceptibility for specific internal components based on information received and information stored in the database, wherein the cracking susceptibility determination is based on a base material of the internal component, a weld filler material, and a weld susceptibility index based on a configuration of a weld and historical information of similar internal components in similar reactors, develop contingency options for repair or mitigation of specific internal components based on the cracking susceptibility of specific components, and generate contingency outage schedules for the contingency options. Rather, Spriggs et al. describe collecting data from a plurality of data acquisition devices and generating alarms when the collected data is outside a predetermined allowable range. Spriggs et al. do not describe nor suggest developing inspection recommendations from the collected data, and do not describe nor suggest determining cracking susceptibility of specific internal nuclear reactor plant components based on the collected data.

Further, as explained above, Maguire et al. describe that their system reviews historical data relating to a component, evaluates age degradation and extrapolates into the future to develop a life profile including measures of life left and useful life. The Office Action, at page 4, admits that "Maguire does not specifically disclose cracking". Also, the Office Action dated July 27, 2004 admits, at page 4, that "Maguire does not specifically disclose. 'determining cracking susceptibility for specific components'". Accordingly, Maguire et al. do not describe nor suggest determining cracking susceptibility for specific internal components. Also, as explained above, Applicants submit that it would not be obvious to one skilled in the art to modify Maquire to include determine cracking susceptibility for specific internal components based on information received and information stored in the database, wherein the cracking susceptibility determination is based on a base material of the internal component, a weld filler

material, and a weld susceptibility index based on a configuration of a weld and historical information of similar internal components in similar reactors. Accordingly, Applicants submit that Claim 33 is patentable over Spriggs et al. and Maguire et al., alone or in combination.

Claims 34-35 and 37-58, 60-64, 66-72, and 74-76 depend from independent Claim 33. When the recitations of dependent Claims 34-35 and 37-58, 60-64, 66-72, and 74-76 are considered in combination with the recitations of Claim 33, Applicants respectfully submit that Claims 34-35 and 37-58, 60-64, 66-72, and 74-76 likewise are patentable over Spriggs et al. and Maguire et al., alone or in combination.

For the reasons set forth above, Applicants respectfully request that the Section 103(a) rejection of Claims 1-5, 7-21, 23-35, 37-58, 60-64, 66-72, and 74-76 be withdrawn.

The rejection of Claims 22, 36, 65, and 73 under 35 U.S.C. § 103(a) as being unpatentable over Spriggs et al. (US 6,421,571) in view of Maguire et al. (US 5,331,579), and further in view of Bodo et al. (US 6,122,239) is respectfully traversed.

At least for the reasons explained above, independent Claims 1 and 33 are submitted to be patentable over Spriggs et al. and Maguire et al., alone or in combination.

Bodo et al. is cited for teaching a method and system where the sending component functions in response to a voice command. Bodo et al. is not cited for, and does not teach a method that includes the steps of developing inspection recommendations for specific internal components based on information received and information stored in the database, determining cracking susceptibility for specific internal components based on information received and information stored in the database, wherein the cracking susceptibility determination is based on a base material of the internal component, a weld filler material, and a weld susceptibility index based on a configuration of a weld and historical information of similar internal components in

similar reactors, and developing contingency options for repair or mitigation of specific internal components. Also, Bodo et al. is not cited for, and does not teach a server system configured to develop inspection recommendations for specific internal components based on information received and information stored in the database, determine cracking susceptibility for specific internal components based on information received and information stored in the database, wherein the cracking susceptibility determination is based on a base material of the internal component, a weld filler material, and a weld susceptibility index based on a configuration of a weld and historical information of similar internal components in similar reactors, and develop contingency options for repair or mitigation of specific internal components. As explained above, Spriggs et al. and Maguire et al., alone or in combination, do not describe nor suggest such a method or such a system.

Spriggs et al., Maguire et al., and Bodo et al., alone or in combination, do not describe nor suggest a method for managing internal components of nuclear reactor plants as recited in Claim 1 or a network-based system for managing assets as recited in Claim 33. Particularly, and as explained above, Spriggs et al., Maguire et al., and Bodo et al., alone or in combination, do not describe nor suggest a method that includes the steps of developing inspection recommendations for specific internal components based on information received and information stored in the database, determining cracking susceptibility for specific internal components based on information received and information stored in the database, wherein the cracking susceptibility determination is based on a base material of the internal component, a weld filler material, and a weld susceptibility index based on a configuration of a weld and historical information of similar internal components in similar reactors, and developing contingency options for repair or mitigation of specific internal components.. Further, Spriggs et



al., Maguire et al., and Bodo et al., alone or in combination, do not describe nor suggest a server system configured to develop inspection recommendations for specific internal components based on information received and information stored in the database, determine cracking susceptibility for specific internal components based on information received and information stored in the database, wherein the cracking susceptibility determination is based on a base material of the internal component, a weld filler material, and a weld susceptibility index based on a configuration of a weld and historical information of similar internal components in similar reactors, and develop contingency options for repair or mitigation of specific internal components.. Accordingly, Applicants submit that independent Claims 1 and 33 are patentable over Spriggs et al., Maguire et al., and Bodo et al., alone or in combination.

Claim 22 depends from independent Claim 1 and Claims 36, 65, and 73 depend from independent Claim 33. When the recitations of dependent Claims 22 and 36, 65, and 73 are considered in combination with the recitations of Claims 1 and 33 respectively, Applicants respectfully submit that Claims 22, 36, 65, and 73 likewise are patentable over Spriggs et al., Maguire et al., and Bodo et al., alone or in combination.

For the reasons set forth above, Applicants respectfully request that the Section 103(a) rejection of Claims 22, 36, 65, and 73 be withdrawn.

Further, Applicants disagree with the suggestion on pages 19-21 that Applicants' traverse was not adequate regarding dependent Claims 21, 64, 72, 28, and 74. Particularly, Applicants submit that the reasons that the independent claims that these dependent claims depend from were fully discussed and explained and that because these dependent claims include all the recitations included in the independent claim from which they depend from, the reasons that these independent claims were patentable were also fully discussed and explained. Accordingly,

the recitations of these dependent claims in combination with the recitations of the independent claim from which they depend, are novel and not obvious, and therefore are patentable over the cited art.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Favorable action is respectfully solicited.

Respectfully submitted,

A handwritten signature in black ink, reading "Michael Tersillo". The signature is fluid and cursive, with the first name "Michael" and last name "Tersillo" clearly distinguishable.

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